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(54) Title: A PHOSPHA-ADAMANTANE (S) CATALYTIC SYSTEM

(57) **Abstract:** A catalyst system capable of catalysing the carbonylation of an olefinally unsaturated compound is described. The catalyst system is obtainable by combining: (a) a metal of Group VIB or Group VIII B or a compound thereof; and (b) a bidentate phosphine of general formula (I)  $\text{Ad} \text{ } _2 \text{ (CR}^1\text{R}^2\text{R}^3)_2 \text{ Q}^2\text{-A- (K, D) Ar (E, Z) -B-Q}^1 \text{ (Ad) } _2 \text{ (CR}^1\text{R}^2\text{R}^3)_2 \text{ } _2$ . Ad represents an optionally substituted adamantyl radical bonded to the phosphorous atom via any one of its tertiary carbon atoms. A method of production of the catalyst is also illustrated.

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